

**REMARKS**

Applicant acknowledges receipt of the Final Office Action mailed October 31, 2008.

In the Final Office Action, the Examiner rejected claims 1, 8, 9, 15, 16, 18, 19, 23, 24, 27, and 28 under 35 U.S.C. § 103(a) as being unpatentable over *Uno et al.* (U.S. Patent No. 5,008,002) in view of *Roffman* (U.S. Patent No. 5,861,114) and *Oomen* (U.S. Patent No. 5,078,551); rejected claim 5 under 35 U.S.C. § 103(a) as being unpatentable over *Uno* in view of *Roffman* and *Oomen*, and further in view of *Umetani et al.* (U.S. Patent No. 5,861,114); and rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over *Uno* in view of *Roffman* and *Oomen*, and further in view of *Border et al.* (U.S. Patent Pub. No. 2003/0127759).

No claim is amended herein, and claims 1, 2, 5, 6, 8, 9, 11-16, 18-24, and 27-31 will remain pending, with claims 2, 11-14, 20-22, and 29-31 withdrawn from examination. Of the claims under examination, claim 1 is independent.

Applicant traverses the rejections above and respectfully requests reconsideration for at least the reasons that follow.

**I. 35 U.S.C. § 103(a) REJECTIONS**

Applicant traverses the Examiner's rejection of claims 1, 8, 9, 15, 16, 18, 19, 23, 24, 27, and 28 under 35 U.S.C. § 103(a) as being unpatentable over *Uno* in view of *Roffman* and *Oomen*. Applicant respectfully submits that independent claim 1 is patentably distinguishable over *Uno*, *Roffman*, and *Oomen* at least for the reasons described below.

In order to establish a *prima facie* case of obviousness under 35 U.S.C. §103(a), the prior art references (separately or in combination) must teach or suggest all the claim limitations. See M.P.E.P. § 2142, 8th Ed., Rev. 5 (August 2006). “[I]n formulating a rejection under 35 U.S.C. § 103(a) based upon a combination of prior art elements, it remains necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed.” *USPTO Memorandum* from Margaret A. Focarino, Deputy Commissioner for Patent Operations, May 3, 2007, p. 2. “[T]he analysis supporting a rejection ... should be made explicit” and it is “important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements in the manner claimed.” *Id.* (citing *KSR Int’l Co. v. Teleflex, Inc.*, No. 04-1350 (U.S. Apr. 30, 2007)).

*Uno* appears to disclose a process for producing a mold using an ion plating method, including forming an i-carbon film on a mold base for obtaining a press-molded glass article. (*Uno*, Abstract).

The Examiner asserts that “Uno et al. disclose a method of producing a mold for obtaining glass articles comprising cutting a base mold of sintered silicon carbide (SiC) (Figure 2; col. 1, lines 6-33; col. 4, lines 34-42).” Applicant respectfully disagrees.

As evidenced by the attached Declaration, column 4, lines 34-42 of *Uno* was incorrectly translated based on the corresponding Japanese patent. The terms “cut” and “cutting” must be replaced by the terms “ground” and “grinding.” Therefore, *Uno* teaches nothing about a cutting tool and a cutting technique to cut a base mold of a material that is one of a ceramic and a tungsten carbide cobalt alloy and has a hardness not smaller than Rockwell hardness HRA 80 or Vickers hardness Hv 1000.

As admitted by the Examiner, “Uno et al. do not teach how deep the cut is into the SiC film or that the cut is made with a single point cutting tool that is fixed at the single point.” (*Final Office Action*, p. 3, ll. 2-3). *Uno* also fails to teach or suggest a method of forming a die surface onto a producing die to produce an optical element, the method comprising the steps of: “bringing a cutting tool to come in contact with a material so as to cut the material; . . . wherein the material is one of a ceramic and a tungsten carbide cobalt alloy and has a hardness not smaller than Rockwell hardness HRA 80 or Vickers hardness Hv 1000,” as recited in claim 1.

Accordingly, in order to cure the deficiencies of *Uno*, the Examiner relies on *Roffman* and *Oomen* and asserts that “Roffman et al. teach a method of cutting dies/molds for forming complex optical surfaces wherein a single point diamond lathe having submicron precision and repeatability is employed . . .” (*Final Office Action*, p. 3, ll. 4-6); and “Oomen . . . disclose[s] a diamond lathe wherein the cutting point is fixed while the workpiece moves” (*Id.* at p. 3, ll. 7-9).

*Roffman* appears to disclose a method of manufacturing complex optical designs in soft contact lenses using diamond point turning to machine contact lens blanks without the need for polishing the lens. The diamond lathes provide an accuracy of 20 nm and a resolution of 10 nm with an absolute shape accuracy that is better than 1 micron. (*Roffman*, col. 24, ll. 55-60). Moreover, *Roffman* appears to disclose using stainless steel as an insert of a die. (*Id.* at col. 8, ll. 35-37).

*Roffman*, however, fails to teach or suggest a method of forming a die surface onto a producing die to produce an optical element, the method comprising the steps of: “bringing a cutting tool to come in contact with a material so as to cut the material; . . .

wherein the material is one of a ceramic and a tungsten carbide cobalt alloy and has a hardness not smaller than Rockwell hardness HRA 80 or Vickers hardness Hv 1000,” as recited in claim 1.

*Oomen* appears to disclose a diamond tool 1 comprising a tool tip 5 of boron-containing single-crystal diamond. (*Oomen*, Abstract).

*Oomen*, however, fails to teach or suggest a method of forming a die surface onto a producing die to produce an optical element, the method comprising the steps of: “bringing a cutting tool to come in contact with a material so as to cut the material; . . . wherein the material is one of a ceramic and a tungsten carbide cobalt alloy and has a hardness not smaller than Rockwell hardness HRA 80 or Vickers hardness Hv 1000,” as recited in claim 1.

Accordingly, with respect to independent claim 1, *Uno*, *Roffman*, and *Oomen* fail to teach Applicant’s claimed combination, including, *inter alia*:

[a] method of forming a die surface onto a producing die to produce an optical element, the method comprising the steps of: bringing a cutting tool to come in contact with a material so as to cut the material . . . ;

wherein the material is one of a ceramic and a tungsten carbide cobalt alloy and has a hardness not smaller than Rockwell hardness HRA 80 or Vickers hardness Hv 1000 (emphases added).

For at least the foregoing reasons, a *prima facie* case of obviousness has not been established with respect to independent claim 1. Accordingly, independent claim 1, and claims 8, 9, 15, 16, 18, 19, 23, 24, 27, and 28 which depend from claim 1, are patentable over *Uno*, *Roffman*, and *Oomen*. Applicant therefore requests that the

rejection of claims 1, 8, 9, 15, 16, 18, 19, 23, 24, 27, and 28 under 35 U.S.C. § 103(a) be withdrawn.

Claim 5 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Uno* in view of *Roffman* and *Oomen*, and further in view of *Umetani*; and claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over *Uno* in view of *Roffman* and *Oomen*, and further in view of *Border*. The deficiencies of *Uno*, *Roffman*, and *Oomen* are discussed above.

The Examiner relies on *Umetani* for allegedly disclosing that “aspherical surfaces may . . . be made” (*Final Office Action*, p. 4, line 18); and *Border* for allegedly disclosing that “it is known in the art to make microlens molds having diameters down to the micron sized range (paragraph [0005, 0049])” (*Id.* at p. 5, ll. 6-8). Such teachings, even if present in *Umetani* and *Border*, however, fail to teach or suggest, *inter alia*,

[a] method of forming a die surface onto a producing die to produce an optical element, the method comprising the steps of: bringing a cutting tool to come in contact with a material so as to cut the material . . . ;

wherein the material is one of a ceramic and a tungsten carbide cobalt alloy and has a hardness not smaller than Rockwell hardness HRA 80 or Vickers hardness Hv 1000

. . . ,

as required by claim 1 (emphases added).

Therefore, *Uno*, *Roffman*, *Oomen*, *Umetani*, and *Border* fail to teach or suggest all of the limitations of claim 1, and claims 5 and 6 are therefore patentable over *Uno*, *Roffman*, *Oomen*, *Umetani*, and *Border* at least due to their dependence from

independent claim 1. Applicant therefore requests that the rejection of claims 5 and 6 under 35 U.S.C. § 103(a) be withdrawn.

## **II. CONCLUSION**

Applicant respectfully submits that claims 1, 2, 5, 6, 8, 9, 11-16, 18-24, and 27-31 are in condition for allowance.

The Final Office Action contains characterizations of the claims and the related art with which Applicant does not necessarily agree. Unless expressly noted otherwise, Applicant declines to subscribe to any statement or characterization in the Final Office Action.

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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GARRETT & DUNNER, L.L.P.

Dated: December 30, 2008

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**Attachment:** One (1) Declaration under 37 C.F.R. § 1.132 (11 pages)